

## Section II (Remarks)

### A. Summary of Amendments

By the present amendment, claims 1, 23, and 24 have been amended to recite that the inorganic metal powder “contains at least one of not more than 1.5 wt% boron, not more than 0.1 wt% aluminum and not more than 0.1 wt% titanium” and “further contains silicon in an amount of at least 0.8 wt%” when the inorganic powder contains titanium in the absence of boron and aluminum. No new matter within the meaning of 35 U.S.C. § 132 has been added.

Support for the amendments to the claims is provided in the originally-filed application , for example, at Table 1 (see, e.g., Comparison 5 including Titanium with silicon in an amount of 0.8 wt.%) and at page 10, lines 4-16, as reproduced below:

The metal powder **can be composed** in such a manner that the principal component of the metal powder is iron or an iron-based alloy and the **metal powder contains 0.1 wt% aluminum and 0.1 wt% titanium**.

Concerning the metal powder composed in the above-described manner, the **aluminum and titanium content is kept low**. Accordingly, the increasing surface tension of the molten metal, which is a raw material of this metal powder, increases, thereby promoting promotes spheroidization of the metal powder particles. Therefore, it is possible to obtain excellent blast effect. In addition, the metal powder can contain not less than 8 wt% chromium and, therefore, it is possible to inhibit the generation of rust (or oxidation) and thereby maintain excellent blast effect. Moreover, since the **metal powder can contain not more than 1.5 wt% boron**, the surface tension increases, thereby promoting spheroidization of the obtained metal particles.

### B. Claim Rejections Under 35 U.S.C. § 112

In the June 14, 2006 Office Action, claims 1-11 and 23-24 were rejected under 35 U.S.C. § 112, first paragraph, as lacking enablement in the specification for two features. First, the claims were rejected as lacking enablement “for an abrasive comprising at least one of boron, aluminum, and titanium in any and all amounts.” Second, the claims were rejected as lacking enablement for the proviso “when the powder contains titanium in the absence of boron and aluminum, the powder further contains silicon in an amount of 0.8 wt.%.” Such rejections are traversed in application to the amended claims.

With regard to the first rejection of claims 1-11 and 23-24 under 35 U.S.C. § 112, first paragraph, the examiner acknowledged that the specification is “enabling for an abrasive comprising at least one of boron, aluminum, and titanium in the amounts defined in the specification and the original claims.” Office Action, pages 2-3. Independent claims 1, 23, and 24 have all been amended to recite that when the proviso clause is not implicated, the inorganic metal powder “contains at least one of not more than 1.5 wt% boron, not more than 0.1 wt% aluminum and not more than 0.1 wt% titanium” (emphasis added). As noted hereinabove, clear support for such recitation is provided in the originally-filed specification, for example, at page 10, lines 4-16. Given the express support for these amended claim limitations, withdrawal of the rejections under 35 U.S.C. § 112 of independent claims 1, 23, and 24 is respectfully requested. Likewise, since claims 2-11 all depend (whether directly or indirectly) from claim 1, and dependent claims inherently include all the limitations of the claims on which they depend, withdrawal of the rejections under 35 U.S.C. § 112 of claims 2-11 is warranted, and respectfully requested.

With regard to the second rejection of claims 1-11 and 23-24 under 35 U.S.C. § 112, first paragraph, the examiner expressly acknowledged that the specification is “enabling for the proviso ‘when the powder contains titanium in the absence (of) boron and aluminum, the powder further contains silicon in an amount of 0.8wt.%’” (emphasis added) citing as support “table 1, comparison example 5.” Office Action, pages 3-4. In response to the rejection, the proviso clause of independent claims 1, 23, and 24 has been amended to recite that the metal powder “further contains silicon in an amount of at least 0.8 wt%” when the inorganic powder contains titanium in the absence of boron and aluminum. Given the recognized support for these amended claim limitations, withdrawal of the rejections under 35 U.S.C. § 112 of independent claims 1, 23, and 24 is respectfully requested. Likewise, since claims 2-11 all depend (whether directly or indirectly) from claim 1, and dependent claims inherently include all the limitations of the claims on which they depend, withdrawal of the rejections under 35 U.S.C. § 112 of claims 2-11 is warranted, and respectfully requested.

#### C. Claim Rejections Under 35 U.S.C. § 103

In the June 14, 2006 Office Action, claims 1-11 and 23-24 were rejected under 35 U.S.C. § 103(a) as unpatentable for obviousness over U.S. Patent No. 6,712,873 to Bergkvist et al. (“Bergkvist ‘873”) in view of U.S. Patent No. 5,030,677 to Achikita et al. (“Achikita”).

Concerning §103 obviousness rejections, three requirements must be met for a *prima facie* case of obviousness. First the prior art reference(s) must teach all of the limitations of the claims. M.P.E.P. § 2143.03. Second, there must be a motivation to modify the reference or combine the teachings to produce the claimed invention. M.P.E.P. § 2143.01. Third, a reasonable expectation of success is required. M.P.E.P. § 2143.02. In addition, the teaching or suggestion to combine and the expectation of success must both be found in the prior art and not based on applicant's disclosure. M.P.E.P. § 2143.

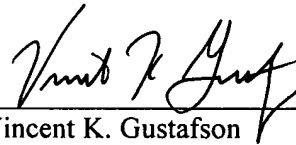
Enclosed herewith is a Declaration by inventor Tokihiro Shimura under 37 CFR §1.131, attesting to the fact that the instant claimed invention, as recited in pending claims 1-11 and 23-24, was made prior to the effective date of Bergkvist '873. By such Declaration, Bergkvist '873 is removed as a prior art reference.

Achikita is cited as teaching powders of the claimed size, but lacks teaching of powders having the claimed composition. With Bergkvist removed as a prior art reference, the remaining Achikita reference fails to teach all of the limitations of the claims, as required by M.P.E.P. § 2143.03 to support a *prima facie* case of obviousness. Accordingly, withdrawal of the rejections of claims 1-11 and 23-24 under 35 U.S.C. § 103(a) is respectfully requested.

**CONCLUSION**

Based on the foregoing, claims 1-11, 23 and 24 have been fully distinguished over the cited references, and are in form and condition for allowance. Issuance of a Notice of Allowance for the application is therefore requested. If any issues remain outstanding, incident to the formal allowance of the application, the Examiner is requested to contact the undersigned attorney at (919) 419-9350 to discuss the same, in order that this application may be allowed and passed to issue.

Respectfully submitted,



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**Enclosure:**

**Declaration of Tokihiro Shimura Under 37 C.F.R. § 1.131 & Exhibits [ 32 pages]  
Credit Card Payment Form PTO-2038 authorizing \$120.00  
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